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ST. BARTHOLOMEW'S HOSPITAL JOURNAL

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EDITORIAL

'Holiday fever' has been endemic, for the last three months, amongst all sections of the Hospital Staff. Symptomatically this disease is more severe than 'Skiingitis' which affects annually a minority of people during the latter winter months. Long and humid hours have been brightened by the anticipation of pleasurable days spent in this, or some other country, and yet unclouded by the documentation so recently declared an essential prelude to the medical undergraduates' vacation.

With the completion of the holidays, many refreshed and active minds have begun to assess the opportunities presented by the future months. The Journal—which receives always its share of criticism—is itself taking stock of its literary assets and contemplating its future policy.

A Journal must be neither complacent nor conservative regarding the type, quality and quantity of its material. This Journal exists—it is hoped—to provide pleasurable and informative reading for its fifteen hundred or more subscribers. Potential authors are derived almost entirely from the ranks of our readers, yet the medical undergraduates, who constitute one of the largest sections, contribute the least. To improve upon its present standard and punctuality, the Journal requires a selection from larger quantities of literary material.

Recent allegations of student apathy are amply justified when applicable to the present undergraduate attitude towards the Journal. Although more student authors of the longer type of article are required, other equally important contributions are necessary. To instil more light relief and life into the Journal we urgently require more letters to the Editor, more quotes, candid cameramen, poets, cartoonists, artists, etc. Several sports clubs make little or no effort to report their activities. No publication can adequately report or advertise any event without the co-operation of all those concerned.

The Publications Committee is very grateful to all those people who conscientiously completed the Questionnaire. In this manner these people will have contributed to a future series of articles based upon the results of this survey. Perhaps these anonymous contributions will be augmented in the near future by more personal efforts.

All sections of readers must feel entitled to contribute to *their* Journal. With the reintroduction of a Nurses' Representative (Miss P. R. Skinner) we look forward to more contributions from the Nurses Home. Recent letters to national newspapers and advertisements in the *Nursing Times* and *Mirror* for Staff Nurse positions at Bart's may stimulate a literary response.

The Fountain will celebrate shortly its centenary. Although it is hoped to publish a short history of this structure, it is felt that this would do scant justice to so important a part of Bart's life. The Fountain has witnessed many amusing, romantic and tragic scenes. It is hoped that some of our older readers will share their anecdotes relating to the Fountain.

Dr. I. S. Ravdin presents the first "Pennsylvania Award" to Mr. F. C. W. Capps
(*See letters to the Editor*)

PERPETUAL STUDENT

On July 23rd Dr. Frank Gerbode of Stanford University, San Franciso, was enrolled as a perpetual student of the Medical College. The ceremony took place before a large audience in the clinical lecture theatre and was held on the occasion of a lecture by Dr. Gerbode on Cardiac Surgery. Mr. F. W. Capps introduced Dr. Gerbode and Sir James Paterson Ross explained that the perpetual studentship was the highest honour that the college could confer and described how Dr. Gerbode had stimulated laboratory surgical research in the hospital during his visit here in 1949. Sir James also mentioned the exchange at postgraduate level between Stanford and St. Bartholomew's that had become established as a result of Dr. Gerbode's efforts. The Dean (Mr. D. F. Ellison Nash) invited Dr. Gerbode to sign the college register and the new perpetual student, who was warmly received by his audience, then gave a brilliant account of recent developments in cardiac surgery with particular reference to his experience with the pump oxygenator. The lecture was followed by a fascinating film which showed clearly the precise intracardiac operations made possible by the use of an extra-corporeal circulation.

The proceedings concluded with the presentation to Dr. Gerbode by Mr. J. B. Hume of the "History of St. Bartholomew's Hospital" by Sir Norman Moore.

STUDENTS' UNION COUNCIL MEETING

At the meeting held on Wednesday, June 16th, C. G. Beardwell was elected Senior Secretary and R. M. Hadley, Junior Secretary.

Mr. Silverstone reported that he had bought and read a copy of "Sennet," as requested by the Council, and considered that it was not worth obtaining copies for the Abernethian room. Mr. Thornton's request for the loan

of club minute books was brought to the attention of the Council and it was decided that club secretaries should be asked to co-operate by lending him their minute books.

The award of Honours Colours to Messrs. D. S. Wright and D. Godwin for Hockey was approved.

Mr. Bootes requested the Council's permission to proceed with the printing of a new and revised edition of the Students' Union Guidebook, this was granted. A grant of £30 to the Boat Club to cover the expenses of the crew sent to Henley was also approved.

Other matters raised were the need for repairs to the piano at Charterhouse Square and the desire of some members of the S.U. for the provision of iced coffee, sandwiches and bread and butter in the refectory. The Senior Secretary was instructed to look into these matters.

CONGRATULATIONS

We would like to extend our sincere congratulations and good wishes to Dr. Hilary Titterington on her graduation at Edinburgh in July.

Miss Titterington while on her long " visit " to us in Henry, made many friends, all of whom admire her achievement in overcoming so many difficulties after her accident, and finally qualifying this year.

FAREWELL DINNER

It is proposed to hold a farewell dinner for Dr. Geoffrey Bourne in October. Any of Dr. Bourne's previous housemen and registrars who would like to attend please contact David Weitzman in the Cardiac Department.

10th DECENNIAL CLUB

The 10th Decennial Contemporary Club annual dinner will be held on Wednesday, 29th October, at 7 p.m., for 7.30 p.m., at the Royal Thames Yacht Club, 60 Knightsbridge, S.W.1. Members of the 8th and 9th Decennial Clubs would be welcomed. Would all members wishing to come send their acceptances together with their cheques for £2 2s. 0d. to Dr. Geoffrey Bourne, 20 Harley House, Marylebone Road, London, N.W.1.

Dr. Gervas C. Wells-Cole will take the chair.

CLINICAL VISITORS

We extend a welcome to two more Bristol Clinical Students, A. M. Wilson and H. Steiner.

JOURNAL OFFICERS

J. Chapman has succeeded M. I. D. Cawley as Manager to the Journal.

J. E. Cawdery has been appointed Assistant Manager to the Journal.

Miss Pamela R. Skinner has been appointed Nurses Representative.

50 YEARS AGO

Cost 6d. per copy. *A Doctor as Editor*

The new Pathology Laboratory nearing its completion.

Mr. C. Gordon-Watson appointed Surgeon to St. Mark's Hospital for Fistula.

An article by E. C. Morland on the *new* " Conjunctival Tuberculin Reaction."

A description of the new Orthopaedic Department, which at that time excelled any other similar department to be found in a London Teaching Hospital. Together with this department went the Physical Exercise Room or Medical Gymnasium. Exercises were controlled by (a) Two men trained in Sweden for the men (b) An English lady trained in Sweden, assisted by the hospital nursing staff, for the women. The Orthopaedic Surgeons were allowed the

use of eight beds, four in Charity Ward and four in Lawrence Ward.

The students were presented with a new notice board for the use of the amalgamated clubs. They preserved their usual good relationship with the police force by beating "D" Division of the Metropolitan Police by 6 goals to 5 at water polo.

CALENDAR

September

Sat., 6th.—Medical and Surgical Units on duty.
Mr. G. H. Ellis on duty.

Sat., 13th.—Dr. Geoffrey Bourne on duty.
Mr. J. B. Hume on duty.
Mr. F. T. Evans on duty.

Sat., 20th.—Dr. A. W. Spence on duty.
Mr. C. Naunton Morgan on duty.
Mr. R. A. Bowen on duty.

Sat., 27th.—Dr. R. Bodley-Scott on duty.
Mr. R. S. Corbett on duty.
Mr. R. W. Ballantine on duty.

October

Sat., 4th.—Dr. E. R. Cullinan on duty.
Mr. J. P. Hosford on duty.
Mr. C. Langton Hewer on duty.

Sat., 11th.—Medical and Surgical Units on duty.
Mr. G. H. Ellis on duty.

OBITUARY

SYDNEY ATKIN, M.B., B.Chir.

Dr. C. Sydney Atkin, who died recently at the age of 69 and whose obituary notice appeared on page 152 of the Journal, belonged to a long line of doctors.

His father, grandfather and great-grandfather all practised in the City of Sheffield and his son has taken on the family practice.

He was educated at Marlborough, Caius College and Bart's.

He was a member of the Cambridge University Hockey Team in 1909 and 1910. He played hockey for England against Wales, Scotland and France in 1913 and in 1920 he took part in the Olympic games.

He served as a Captain in the R.A.M.C. in the British Expeditionary Force in 1914, and in 1921 he joined the family practice.

He was one of the outstanding athletes of his generation at the Hospital. His friends will always remember him as a man who radiated health, happiness and sympathy.

Throughout his long and busy professional life he lived up to the fine traditions of his early training. In his native city he will always be remembered as one more of a long line of doctors whose lives were spent in selfless service.

R.M.V.

ANNOUNCEMENTS

Engagements

BACKHOUSE—FERGUSON.—The engagement is announced between Dr. Ian Backhouse and Janet Ferguson, and the wedding will take place at Port Elisabeth, Cape Province, South Africa, on October 25th.

FARMER—JACKSON.—The engagement is announced between Dr. Rex Farmer and Margaret Anne Johnson.

GOODWIN—BRUCE.—The engagement is announced between Dr. Charles Stewart Goodwin and Jean Elizabeth Bruce.

HAYWARD—COWAN.—The engagement is announced between Ian Alistair Craufurd Hayward and Sheila Elizabeth Alma Cowan.

POCOCK—TRESIDDER.—The engagement is announced between Eric William Pocock, M.R.C.V.S., and Dr. Angela Margaret Tresidder.

WILLIAMS—BRIND.—The engagement is announced between Dr. David Knapman Williams and Frances Rosemary Brind.

Marriages

KIELTY—SPENCER.—On May 24th, Dr. Michael Gerard Kielty to Patricia Mary Spencer.

MCMASTER—TAYLOR.—On July 12th, Albert Brian Malcolm McMaster to Elizabeth St. Denys Martin Taylor.

MILLARD—TROUGHTON.—On July 26th, Dr. John Millard to Dr. Rosemary Troughton.

Births

BETHELL.—On July 15th, to Aline, wife of Dr. M. F. Bethell, a sister for Amanda and Guy.

BEVAN-JONES.—On August 4th, to Muriel, wife of Dr. H. Bevan-Jones, a sister for Bruce, Penny and Hilary.

DOUGLASS.—On August 6th, to Eleanor Mary (Molly), wife of Dr. Donald J. Douglass, a daughter.

MELOTTE.—On July 5th, to Kathleen, wife of Dr. G. Melotte, a son.

MORLEY.—On August 10th, to Elisabeth, wife of Dr. David Morley, a son (Jonathan David).

OSTLERE.—On July 29th, to Mary, wife of Gordon Ostlere, a daughter (Katharine Mary).

PEARCE.—On July 23rd, to Patricia, wife of Dr. James Pearce, a son (Nicholas John Mark), brother for Paul James Martin.

Deaths

BEDDOW.—On August 11th, Dr. Harold Josiah Beddow, aged 79. Qualified 1907.

MCCULLOCH SMITH.—On August 2nd, Anne McCulloch Smith, a former sister of the Massage Department.

THOMAS.—On July 12th, Dr. T. Ben Thomas, aged 60. Qualified 1923.

WAY.—On July 15th, Dr. Leslie Ferguson Kennedy Way, D.S.O. Qualified 1910.

NOTICES

Appointments

BRITISH MEDICAL ASSOCIATION.—The Gold Medal for Distinguished Merit has been presented to Lord Adrian.

UNIVERSITY OF EDINBURGH.—Dr. K. W. Donald has been appointed to the Chair of Medicine at Edinburgh University.

ROYAL COLLEGE OF SURGEONS.—Sir James Paterson Ross has been re-elected President of the Royal College of Surgeons of England. Sir Archibald McIndoe was re-elected Vice-President.

ROYAL SOCIETY OF MEDICINE.—Dr. F. Parkes Weber has been elected an Honorary Fellow of the Royal Society of Medicine.

UNIVERSITY OF LJUBLJANA.—Sir Harold Gillies has been elected Honorary Doctor of Medicine of the University of Ljubljana, Yugoslavia.

Professor K. J. Franklin has been elected an Honorary Member of the Renal Association.

The Eli Lilly Travelling Fellowship in Medicine has been awarded to Mr. J. D. Griffiths. M.S., F.R.C.S.

Changes of Address

PROFESSOR K. J. FRANKLIN (after Mid-Sept.), Llanberis, Yarnton, Oxford. Tel.: Kidlington 3104.

DR. W. D. NICOL, The Lord Chancellor's Visitor's Office, Staffordshire House, Store Street, London, W.C.1.

BRIGADIER R. B. PRICE, Hindover, Furze Hill, Seale, Nr. Farnham, Surrey.

MR. R. HARVEY WILLIAMS, F.R.C.S., Carrig More, Youghal, Co. Cork, Eire.

MR. H. W. WILSON, M.S., Chevington Lodge, Flixton Road, Bungay, Suffolk.

A PIONEER IN THE ATTACK ON CANCER

by **R. S. CORBETT**

I have chosen as my title for this Lecture, " A Pioneer In The Attack on Cancer," for two reasons.

I have used the word " Pioneer " for if one looks up a definition of this word it states " one of a party of soldiers who clears the road before an army—one who goes before to prepare the way for others." I am sure that what I have to tell you about Gordon-Watson will amply justify this word being applied to him.

The second half of the title " The Attack On Cancer " came to me when I was looking through his writings, and found that the farewell Lecture given to the students at the invitation of the then Sub-Dean, Dr. Harris, was titled " The Attack On Cancer."

I feel it would not be out of place to run over briefly his earlier life, before making special reference to his work on the Honorary Staff of this Hospital, and pointing out the progress in treatment of diseases of the colon and rectum in which he was particularly interested.

Charles Gordon Watson, later assuming the name Charles Gordon Gordon-Watson by deed poll in 1920, was born on the 18th of April, 1874. He was the eighth child and the fifth son of the Reverend and Mrs. Henry George Watson, Vicar of St. Leonard's, Buckinghamshire. Although this family of twelve was brought up in the English Church he joined the Roman Catholic Church early in life. In this connection there are two very handsome stained glass windows in the Chapel of St. Andrew's Hospital, Dollis Hill, in his memory. He served this Hospital for many years as a Consultant. His association opened the door for many of us Bart's men to enter. We are grateful to him for this association.

He was educated at St. Mark's, Windsor, and St. Bartholomew's Hospital Medical School. His ambitions were to be a soldier and not a doctor, yet in May, 1893 he says " I interviewed the Dean at Bart's and entered the school, I knew not why! "

His reactions at this time and subsequently, are well told in 3 volumes of typescript which he left to the Hospital entitled " Forty Years In Surgical Harness." He wrote this during his retirement, and I have made full use of it.

As a medical student the tragedies of life and the gratitude of the poor were brought home to him. He enjoyed the community life, the sport, the Hospital Smoking Concerts —so popular at that time, and the " rags." To illustrate this he records that on one afternoon some twenty or more students organised a rat hunt in the old Smoking Room downstairs. A sack of rats was secured from Billingsgate Market, and three smart terriers were produced. The tables were ranged round the sides and the students armed themselves with sticks. A few rats were released and the terriers unleashed. Soon there was pandemonium as more and more rats were let loose—chairs were broken, tables collapsed and the noise was terrific. When the turmoil was at its height, in walked the Dean, and some rats escaped with the terriers in full cry. Later on the students assembled before the Discipline Committee and the unfortunate man who brought the rats was regarded as the instigator (quite erroneously), and was sent down for the rest of term.

Watson qualified in April, 1898, and after serving six months as House Surgeon at the Norfolk and Norwich Hospital he was appointed House Surgeon at Bart's to Howard Marsh and Lockwood the following October.

Abdominal surgery was very limited at that time. Intestinal resections and anastomoses were rarely carried out, as they were often fatal, so that a carcinoma of the stomach or colon was not often removed. In 1899, eleven cases of carcinoma of the stomach were admitted—five were operated upon.

In one case a pylorectomy was performed, and in two gastro-jejunostomy only. The remaining two were submitted to exploratory laparotomy only. One gastro-jejunostomy only survived, and this was on account of the use of Murphy's " Anastomosis button " devised in 1892.

Carcinoma of the stomach is still a problem to us—a palliative sub-total gastrectomy is considered the more reasonable treatment. We have carried out five jejunal replacements after total gastrectomy since 1955, and four are alive and well. One is extremely well—doing a full days' work as a furniture remover, one year and eight months after his operation.

Carcinoma of the Colon and Rectum was usually treated by " Colotomy," as it was then called. The operation was performed in 20 cases of which 10 died. Excision of the rectum was only carried out in 4 cases and 1 died.

Acute Appendicitis at that time was more usually treated by waiting for an abscess to form, when incision and drainage effected a cure. The first appendicectomy with recovery carried out in Bart's was reported in 1889. When Watson was a House Surgeon there were 35 cases of acute appendicitis admitted, three died. The remainder had incision and drainage and frequently a washout of the peritoneal cavity.

Antiseptics were the order of the day, but tribute is paid to Lockwood, the Junior Assistant Surgeon, as being a" Pioneer " at Bart's in Asepsis.

Anaesthesia was in its infancy. In 1899, 6807 anaesthetics were administered, of which 2504 were chloroform, 2382—Gas and Ether, and 1706,—Gas alone. Harrison Cripps used to say that there were only three forms of anesthesia—Chloroform, Ether and Straps! Could we not bring this up to date and say, Pentothal, Curare, and Ice!

There were no telephones in those days, and the Night Porter was quite an institution in himself. He always diagnosed the night emergency for the House Surgeon on duty. He had to fetch the Surgeon in a cab, and it was not uncommon for the Chief to borrow half a crown for the cab fare to take him home!

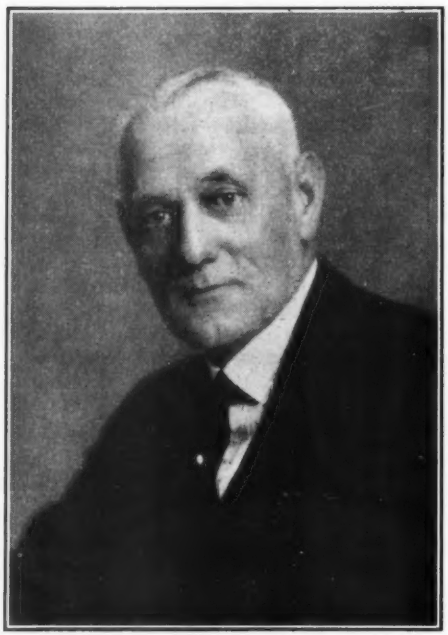
The " drunks " were treated with large doses of Senna, and there is the delightful story of the " dead drunk " who was brought in by the police. The Dresser on night duty turned to the constable and said " I think he is dead "—the drunk suddenly sat up and said " I am not dead "; whereupon the constable said " Lie down, the doctor knows best."

In July 1899, towards the end of his year's service as House Surgeon, Watson went in company with Jamieson—a House Physician and nephew of the well-known " Dr. Jim," of Jamieson raid fame, to secure an interview with the D.G. of the Army Medical Service. His pioneer spirit showed itself, and he was anxious to volunteer to serve in South Africa in the event of War. He was delighted to be accepted for one year as civil surgeon, the terms being £1 per day and a horse to be provided. He left on the first troop transport the *Roslin Castle* in October. On this journey Watson learnt to play bridge, though most of the Officers played Whist. This game he always enjoyed and in the latter part of his time at Bart's he looked forward to a game at the Garrick Club before dinner. This transport had the distinction of putting up the first " black out " in War, on the 25th October, 1899. They pasted brown paper over the port-holes and dined by candlelight, and he was reprimanded by Kitchener's brother for striking a match to light his pipe on deck.

He was detailed to Wynberg, a suburb of Capetown, where the barracks had been converted into a Hospital, and in the course of his duties amputated the leg of General Pretorious. He was here six months, and during this time made some interesting and helpful associates. The Duke of Portland's Hospital was formed at a later date in Rondebosch—a neighbouring suburb. Here, Anthony Bowlby, whom he had left as an Assistant Surgeon at Bart's, was the Surgeon in Charge, and Cuthbert Wallace from St. Thomas's was his second string. Both of them served in the first World War as Consultants, and each received a Knighthood, and in the course of time, each became President of the Royal College of Surgeons.

He refers to his early morning rides in very attractive country, the great Constantia district and visit to a well-known Cape

family, the Cloetes, who happen to be distant relations of mine. At their historic and attractive Dutch homestead—" Alphen," surrounded by orchards and vineyards, he enjoyed a tea-party at which they feasted on mulberries and magnificent peaches.



Sir Charles Gordon Gordon-Watson

In May, 1900, he left Wynberg and went up country and was transferred to Colonel de Gallais' force, and became M.O. to the Burma Mounted Infantry. He was present at the battle of Bothaville near Kronstad, where de Gallais won a V.C. in the defeat of the Boer General De Wet (but where he himself fell in the moment of victory). Watson was present in the farmhouse where this gallant Colonel died, but could not save him. He returned to England after serving his year with a three month extension, bringing with him a trophy—an astragalus of a Boer buried at Spion Kop. This he presented to Hallett, our good and faithful dissecting room attendant at that time. For his services in this war Watson was awarded the Campaign medal with three clasps. He kept his "Sam Browne" and Frankis Evans recalls that at his last operation in private, when as a Major-General he was putting on his uniform and tightening his belt, said " The same holes as in the Boer War, Frankis!"

Looking back on his experiences in the South African War he quotes Cecil Rhodes:

" So many worlds, such things to be,
So little done, so much to do."

How similar was the utterance of Sir Winston Churchill (another Boer War Veteran) in the second World War.

During the ten years following his return from South Africa he prepared himself for the Staff. He adopted the standard formula of being first a Demonstrator in Anatomy, which post he held for four years, to gain teaching experience, and then a Surgical Registrar. There was only one Surgical Registrar to the Hospital in those days. This had its advantages and disadvantages. The advantages were that he gained great clinical experience. At one time owing to sickness or leave periods he acted for three Assistant Surgeons. In this office he was also responsible for the post-mortems, and he claimed to have done over a thousand. This he says was of the greatest value to him. The great disadvantage was that he got no operative experience at all—in fact he said he had not done a single major operation in Bart's until he got on the Staff. This I think explains the title of Assistant Surgeon (now given up) for a Surgeon when appointed to the Staff, actually assisted his Chief on one operating day a week.

He was fortunate in being appointed to the Metropolitan Hospital in the same year that he passed his Fellowship which was two years after his return from the Boer War. This gave him operating experience. He was instrumental in getting two Surgical Registrars appointed owing to the volume of work entailed in being responsible for all records as well as the morbid pathology and some teaching in wards and out-patients.

How things have changed! We now have five Surgical Registrars and are wise to retain the title of Chief Assistant for them, as that is in fact what they are to us. Sir Charles rectified the error in his training by making me responsible for the night emergencies the whole time I was on the firm. The swing

of the pendulum has possibly swung too far now, when one realises the amount of operating that the Senior Registrar gets when he leaves his Teaching Hospital and serves in a Sector Hospital. He gets very little time to sleep, and less to think!

Turning to the lighter side, he was a keen sportsman. He indulged in racing, fishing and shooting. His pioneer spirit was shown in his enthusiasm for motoring. He took part in the motor-cycle trials to Edinburgh and back (see picture of the famous motor-cycle).

Later he invested in a motor car. It caused quite a stir when he drove up in a motor car to the Hospital. Our Librarian has reminded me that Lockwood was the first member of the Staff to come to Hospital in a motor car. He owned a scarlet Panhard known as the " Red Peril."

Watson's pioneer spirit again attracted him to the Army, and he was commissioned as Surgeon to the 3rd Middlesex Royal Garrison Artillery Volunteers. Afterwards he transferred to the Territorial Army as Captain, R.A.M.C., on its foundation in 1908. I would like here to refer to Michael Gordon-Watson, now Colonel in the 1st Brigade of Irish Guards, who has served his country with such distinction. How proud Sir Charles would be to see him now.

In 1910 Watson was elected Assistant Surgeon to St. Bartholomew's Hospital and he served with Howard Marsh. This gave him a great interest in Orthopaedics. He liked the treatment of fractures and made contributions to the literature, which included a revision of Howard Marsh's text book on Diseases of the Joints and Spine.

In 1914 came the first World War, and this brought him back to the battlefield again on which his pioneer spirit thrived. Watson was posted to the No. 1 British Red Cross Hospital, the Duchess of Westminster's at Le Touquet, where he served from September, 1914, to November, 1916. Then, as Colonel A.M.S. he became Consulting Surgeon to the 2nd Army in France and afterwards to the Italian Expeditionary Force. He was mentioned in despatches, created a C.M.G. in January 1916 for military operations in the field, and a Knighthood (K.B.E.) was conferred on him on 3rd June, 1919.

After the War, Sir Charles, as he now was, noted great changes for the Consultant. Doctors returning from the War were confident of their powers to operate, and engaged in surgery in their Cottage Hospitals. These multiplied and improved and much emergency surgery was done locally. Their enthusiasm carried them too far, and the pendulum swung back, and in consequence general practice suffered and the reputation of the Hospital was not often improved. There is no doubt that as a result, when the National Health Service was formed, the Ministry of Health took the drastic action of abolishing the majority of the so-called " Cottage Hospitals."

Specialisation became evident to Sir Charles, and as a result of being appointed to St. Mark's Hospital, his interest in orthopaedics waned, and that for rectal diseases grew.

St. Mark's Hospital was founded by a Bart's man—Frederick Salmon, in 1835 in Aldersgate Street, and it became firmly established in the City Road in 1854. Sir

Charles was a very loyal member of this Hospital, and I am sure he would be proud to know, as we all are, that this link with Bart's is even stronger than it was when he retired in favour of Naunton Morgan—I refer to the appointment of Ian Todd to the Bart's Staff next October.

Sir Charles was the last adherent to the clamp and cautery method of treating piles, and Oh! what anxieties the Theatre Sister had to keep the " fiery furnace " going.

There was a popular prejudice against colostomy. The story is told of Sir Charles after going to great lengths to describe the details of a colostomy to a patient, said, " Well! what do you think of that?" The patient turned to Sister and said, " Fetch me my trousers."

This operation was first recorded in Bart's in 1887, and the mortality at that time was 45 per cent. Sir Charles said it was 101 per cent, and when asked what the 1 per cent was for, he said, " For the patient who died when he heard of it." (The popular site was the lumbar region in those days, but today the iliac site is no longer attended by any fears or danger to life.)

Cancer Research

In the field of Cancer Research he had two outstanding colleagues at St. Mark's with whom he worked.

The first was **Lockhart-Mummery**—Sir Charles recognised that research must be organised, stimulated by adequate funds and co-ordinated. He was in favour of the education of the public to recognise pre-cancerous conditions, and the early signs of cancer. With this idea he joined Lockhart-Mummery and fifteen others, and founded the British Empire Cancer Campaign. These men agreed in 1922 that the complexity of the cancer problem had been so clearly demonstrated that its solution would not be found in any one field, or in any one institution. They saw the need for an organisation whose primary function would not be to own Laboratories, and conduct its own researches therein, but to utilise the brains and facilities of the already well-established research institutions, such as those associated with the teaching Hospitals and Universities. The Campaign was to co-ordinate and initiate, encourage without direction, filling up gaps and advising against unnecessary duplication. This was their policy. Time has fully justified and paid tribute to the far-sightedness of those founders. Sir Charles was Chairman of the Investigation Committee for twenty years, and untiring in his work for the Campaign. Up to the time of his death in 1949, he was a very active member of the Grand Council, and of the Executive Committee.

It pleases me to feel that I have been able to follow, as Chairman of the Cancer Department Committee, the work in this field, and to serve on the Grand Council of the B.E.C.C. with Dr. Malcolm Donaldson at the present time. I can report to you that there has been a swift increase in the post-war income each year, and this has meant a correspondingly swift increase in activity. In the pre-war era, the income rose from thirty-five thousand pounds (£35,000) to sixty-five thousand (£65,000) and at all times research was supported to the limit of these figures. We were informed at the Annual Meeting of the Campaign, two weeks ago, that the income has risen to seven-hundred and sixty-three thousand pounds (£763,000) excluding the funds raised by the autonomous Councils, and that in the thirty-five years since it has been established five million pounds have been received and spent on research. How gratified Sir Charles would be to know this!

The other member of St. Mark's Staff to whom I wish to refer is **Dr. Cuthbert Dukes.** In all his writings Sir Charles pays the greatest tribute to Cuthbert Dukes. In the Pathological Department at St. Mark's he has always given masterly guidance and advice to the Surgical Staff. His detailed investigation of every rectum excised showed that there was a direct spread through continuity of tissue starting in a mass of a typical epithelium. This may resemble a protruding epithelial mass from an area of hyperplasia, or a papilloma or an adenoma. The proliferation spreads more transversely than longitudinally, and its depth increases by infiltration. From this he formulated his **three grades of carcinoma of the rectum,** now universally accepted, which depend upon the depth of the spread by direct continuity. The 'A' case is a raised mass of cells, which only extends down to the sub-mucosa. In the 'B' case, there is an extension into the mus-

cular coats, and in the 'C' case there is a spread of the peri-rectal tissues with ulceration and invasion of lymph nodes.

In 1926 I was appointed Chief Assistant to the Gordon-Watson firm on my return from a year's work in America as Instructor in Surgery at the University Hospital of Michigan. I have very happy recollections of the four years that followed, acting as Sir Charles' Assistant both in the Hospital and in his private practice. They served as a most valuable part of my training, and in fact introduced me to the field of colon surgery. I became a member of the Proctological Section of the Royal Society of Medicine, which sprang from the Proctological Society founded by Gordon-Watson and Lockhart-Mummery. In 1945 I was elected President of this Section and in my Presidential address reviewed the surgical treatment of Chronic Ulcerative Colitis, in which disease very little major surgery had been done.

We all admired Sir Charles' unbounded energy and great enthusiasm. He had a great capacity for friendship, and always had a friendly smile. He was a strong supporter of all student activities, presiding over most sports. The Inter-Hospital Boxing Competition was an occasion when he took his Staff to dine at the Garrick Club first, and returned to drink cold lager afterwards. On one occasion he sent me a post-card which caught the midnight post and was delivered at 8 a.m. the next morning, which said, " In case of beer fog, remember 9 a.m. Weymouth House."

He was an enthusiastic golfer and with the aid of Dr. George Graham and myself we founded the Bart's Golfing Society in 1928. His motto in this game was " Beer for distance, and port for accuracy."

CANCER OF THE RECTUM

On the firm we realised that apart from sport his absorbing interest was Cancer of the Rectum. He followed in the footsteps of Harrison Cripps—a Bart's surgeon who was awarded the Jacksonian prize in 1877 for his Essay on the " Possibility of Cure or Relief of the Rectum by Excision." Sir Charles in 1909 advocated a radical form of treatment for this disease on the same lines as the radical treatment for cancer of the tongue and breast. He was a strong supporter of the perineal operation. He contended that perineal excision was preferable to an abdomino-perineal excision, as it was attended by a lower mortality, which outweighed the possible increase in the recurrence rate. This I think was true at that time.

He was very speedy and dexterous in performing this operation and he used two aids—the Egg and the inflation Bag. The **Egg** was a piece of wood shaped like an egg with a small staple at one end to allow for ligature attachment. The egg was pushed into the rectum before the anus was sewn up and tethered to it. He found this of great assistance during the separation of the anterior wall of the rectum from the male urethra and prostate, or from the vagina.

The **Inflation Bag**—this was inserted into the perineal wound before closing. The bag had a tube and tap attached to it for inflation. It was intended to support the pelvic floor after excision, also for the control of haemorrhage, and to act as a drain. It could be deflated to allow for irrigation of the wound and subsequently inflated. It was usually removed after 4-5 days. At the end of a perineal excision he would turn to the Theatre Sister and say—"Sister, my balloon."

Gordon-Watson's figures for operative mortality rate came down from 23 per cent to 13 per cent at this time.

It is of interest to compare present-day figures which were given at the Proctological Section of the Royal Society of Medicine on June 19th, 1957.

The communication was made by Dr. Cuthbert Dukes giving the St. Mark's Hospital statistics for the 25-year period, 1928-1952 inclusive. The operative mortality rate dropped in 25 years from 12·8 per cent to 6·8 per cent.

The resectability rate has also shown a tremendous improvement from 46 per cent to 92 per cent.

The five-year Survival rate of the 'A', ' B ' and ' C ' cases also gives us figures for 'A' cases 99·6 per cent; ' B ' cases 81·5 per

cent and; ' C ' cases 40 per cent.

I would like to pay tribute to Gabriel on his mortality rate of only 2·6 per cent in a total of 422 personal cases over a ten-year period (1947-1956).

Lloyd-Davis and Morgan have popularised the " Synchronous-combined " operation with a saving of time and an ability to deal with the advanced bulky growth involving the other contents of the pelvis.

Naunton Morgan has given us his results of the high rectal growths suitable for " restorative resection," relieving the patient from having to live with a colostomy for the rest of his life. These constituted 27 per cent of his series of 523 cases reviewed last year The operative mortality was the same for synchronous-combined excision and restorative excision 4·2 per cent.

The scope and achievement of rectal surgeons *has* therefore become greater since Sir Charles' time. We congratulate them and must add our thanks to our Anaesthetists for their advances, and our Assistants for the excellent pre- and post-operative care of the patients, which has contributed to these excellent results.

RADIUM TREATMENT OF CARCINOMA OF THE RECTUM

The application of interstitial radium in the treatment of carcinoma of the rectum was the outstanding pioneer work of Gordon-Watson, and was mainly carried out in my time.

He was inspired by the work of Neumann, following a visit to him in Brussels in 1925. Sir Charles felt that in operable growths excision was preferable, but if this was refused or contra-indicated, radium offered a promising alternative.

Accuracy and adequate dosage was the problem. At that time there was no absolute unit of dosage in radium treatment—the use of the Röntgen as a radium dosage unit did not come until about 10 years later. However, a yardstick for measuring dosage was obtained by endeavouring to apply 1 mg. of radium to each cubic centimetre of the irradiated volume. With 30-60 mg. of radium, a 10-day irradiation time was usually adopted, although it was still uncertain whether it was better to apply a large dose over a short period or a smaller dose over a longer period. In the abdomen, the susceptibility of the peritoneum necessitated the use of a shorter irradiation time. Deep X-ray therapy was tried in a few inoperable cases at Sir Charles' instance in 1925, but was soon abandoned, as, with the quality of ray then available, little or no benefit was obtained.

The following methods were used:

1. The Posterior Barrage—a perineal approach was made to the rectum by removal of coccyx and division of levatores ani muscles, giving a free exposure of the ampulla of the rectum. The needles were attached to the threads which were withdrawn in 10 days through the wound to facilitate removal. The perineal wound took about six weeks to heal.

2. The abdominal radiation—this was applied to lesions entirely above the peritoneum. The needles were removed after five to eight days. The dose varied from 2,500 to 6,000 milligram hours. The needles had the disadvantage that they had to be removed and were apt to produce necrosis along the needle track and so encourage peritonitis.

Radon seeds were tried as an alternative, as they could be left *in situ*, but the results with needles were better. Radon seeds were associated with a diminishing intensity of radiation as the " radium emanation," as it was then called, decayed. The seed lost half its strength in four days—there was thus a tendency to under dosage which led to an inhibition of the growth rather than to its destruction.

In these cases a colostomy was performed at the conclusion of the radiation, but not necessarily opened until after removal of the needles.

3. Vaginal Radiation—this was an advantageous route in anterior growths of the rectum, and could be combined with a Posterior Barrage and abdominal radiation.

4. Intra-rectal and Peri-rectal radiation—this was difficult to apply. A variety of tubes were tried in the lumen of the rectum in order to apply the radium to the exact site, but it

was difficult to fix, and on the whole the results were poor.

For **epitheliomata of the anus** however, the perineal and peri-rectal application of the radium needles was easy and results excellent.

RESULTS

Sir Charles treated 93 cases of carcinoma of the rectum with radium during a five-year period up to the end of 1929. He decided that his results were too uncertain to justify its use for the operable case—except when the radical operation is contra-indicated on general grounds. In several instances he reduced the fixed inoperable growth to a state of complete quiescence, *if not cure*. This is suggested in the two cases to which I will refer. Some of the patients remained in good health for periods varying from 7 to 10 years. The outstanding cases were:

1. **Bertie Bispham,** the postman, aged 44 who presented with an inoperable carcinoma of the rectum—with adhesions to pelvic colon and bladder, in December, 1927. There was an annular mass extending for two inches from the anus upwards and with supra-peritoneal extensions. **Intra-peritoneal radium** was used (Dose 2357·5 mg. hrs.). A loop of colon was exteriorised but not opened, and it never had to be used as a colostomy. The patient was alive and reported well when he came up to have a hydrocele tapped in April, 1946—**nineteen years after.**

2. The other remarkable case was **Edward Weekes**, a masseur, aged 37, who had an enormous dosage distributed by **intra-peritoneal radium** in October, 1928 (Dose 2499 mg. hrs.) followed a month later by **radium needles** (Dose 8524·5 mg. hrs.) and two months after that, **radon seeds per rectum** (Dose 4389 mg. hrs.). He was apparently cured. He died from heart failure in April, 1945, **seventeen years after.**

These two cases are remarkable and rewarded Sir Charles for his courage and foresight in applying a new form of treatment in which he showed that radiation in some forms had its place in the treatment of malignant disease, and did appear to effect a cure. The potentialities of radiation had now become well established.

FURTHER PROGRESS IN RADIATION THERAPY

St. Bartholomew's Hospital have led the field in High Voltage research under the able guidance of Doctors Finzi and Levitt since 1924. In 1936 the million volt machine was installed as a gift of the Sassoon family, and applied for the treatment of patients under Dr. Levitt and Mr. Ralph Phillips.

In 1946 we contemplated a linear accelerator and a year later a ten-million volt machine was decided upon under the guidance of Professor Hopwood and Mr. Williams. In 1950, however, this was extended to a fifteen million volt machine similar to one already under construction for Harwell.

The Cancer Department Committee persuaded the Governors of this Hospital to purchase this machine. Having overcome the difficulties with the Ministry of Health. I wish to thank our Treasurer Sir George Aylwen, for his personal interest in this project.

On April 27th, 1955, the inauguration of the Linear Accellerator was carried out by the Duke of Gloucester. This machine is now about to be moved to a new site adjacent to the Hospital in order to apply it to the treatment of patients. This, together with a Cobalt Unit on the same site, will, we trust, keep Bart's in the forefront in the field of radiotherapy.

If only Sir Charles could see today what has grown out of his pioneer work.

CONCLUSIONS

I have reviewed the life of a man—a man we all loved. A great sportsman—hard worker and one who showed great kindness to everyone, especially to me. He had many honours, all of which he justly deserved. He was at heart a soldier—serving in three wars with great distinction. His pioneer spirit was shown not only in his fight for freedom in war, but also in his attack on cancer and his efforts to find a cure.

It has given me great interest and pleasure to look into his life and recall some of his

works. I hope you will forgive my many omissions.

He was above all a Gentleman with strong religious principles which guided him throughout his life until his death at York on the 19th of December, 1949, at the age of 75.

I wish to thank the Council of the College for the honour in being asked to give this Lecture, and all his friends and relations who helped me, and the Photographic Department for their great co-operation.

NOTE

This lecture—the first Gordon-Watson Memoral Lecture—was delivered before members of The International Cancer Congress on July 16th 1958.

A CASE OF CORONARY EMBOLISM

by **GEOFFREY BOURNE**

Coronary embolism is a rare condition, and survival from it is uncommon. In a case report (ref. Circulation 2. 434. 1950.) in 1950 Shrader had collected 45 examples from the literature. Twenty of these resulted from subacute bacterial endocarditis, others from such rarities as thrombi detached from atheroma or syphilis of the aorta, from extracardiac mural thrombosis, from the systemic veins by paradoxical embolism through a right to left patency between the auricles, and from pulmonary vein pathology

In subacute bacterial endocarditis the heart suffers from minor or major embolism in the same manner as do the kidneys and other organs. Multiple small lesions may produce widespread progressive degeneration, or larger masses of clot may cause visible and clinical local infarction. Multiple minute embolism of the heart is probably the cause of the progressive myocardial failure which is responsible for a percentage of the deaths during the later but still active stages of subacute bacterial endocarditis. But when recovery from infection has occurred, provided the patient's heart has not then been severely affected in this way, myocardial functional recovery is also good. The second and larger type of cardiac embolus lodges in a medium sized coronary branch, occluding it, and causing either sudden death or an infarct. The associated pain is identical in position, type and radiation with classical cardiac infarction due to atheroma, and the electrocardiographic changes are similar. The case reported here belongs to this latter group.

The patient was a man aged 42 whose chief complaints were palpitation and fatigue The report to his doctor reads as follows—

" He had pneumonia at the age of 11 which involved the left lung. He was ill for about three weeks. It is unlikely, although possible, that this was in fact an attack of rheumatic pericarditis since the two illnesses clinically are frequently very similar. In 1938 he had palpitation. He was investigated at St. Thomas's Hospital and was told that there was no need for him to worry about his heart. In 1944 he was placed grade III by a medical board, presumably because of the presence of a murmur. He remained well until the end of February 1956 when he began to notice cough, severe night sweats, and loss of appetite. He was admitted to St. Helier Hospital where a diagnosis of subacute bacterial endocarditis was proved bacteriologically. After successful treatment he returned home. One week before his discharge from hospital, while convalescent, he had an attack of unpleasant pain and a sensation of pressure across his upper chest which did not radiate to the arms. It was

at its worst on the first day. It lasted for three or four days in all and has not re-appeared. He returned to bed for three days during this incident. Since then except for palpitation he has had no symptoms. The palpitation was noticed after his discharge from hospital. It has progressively subsided since. There has been no recurrence of sweating or other symptoms suggesting serious trouble

On examination he looked well. The heart rate was 80, the rhythm was regular except for the presence of frequent ventricular premature beats. The diastolic blood pressure was a little raised (142/100). The typical systolic murmur of mitral regurgitation was audible at the apex, into the axilla, and towards the left sternal border. No aortic murmur and no murmurs of mitral stenosis were audible. The lungs and abdominal organs were normal. The urine contained no albumen. The electrocardiogram showed a number of ventricular premature beats. It also showed the typical changes of posterior myocardial infarction. The Q wave was enlarged in leads 2, 3, and VF, and the T wave sharply inverted in these leads. The T wave was also inverted from V4 to V7 indicating some ischaemia of the lateral ventricular muscle. Radiologically the heart was slightly enlarged, the transverse diameter being 14.0 cms. by orthodiagraph. The normal figure for his height, weight and age is 12.8 cms. The enlargement chiefly involves the left ventricle. There is no sign of enlargement of the pulmonary conus, and a normal barium swallow excludes any measurable auricular dilatation.

He clearly has recovered from subacute bacterial endocarditis superimposed no doubt upon an old rheumatic mitral scar. The degree of mitral regurgitation is slight. The interesting point is the clear evidence of postero-lateral myocardial infarction, which I have no doubt was due to embolism from a clot in his mitral valve. The date of the cardiac embolism is doubtful, for the abnormal electrocardiogram was noticed four days after his admission to hospital. The attack of chest pain which occurred a week before his discharge may have been due to a local extension of the lesion. The infarct is now well healed. Its aetiology suggests that it will remain so and that no further trouble will occur. The outlook therefore on all counts is good. The premature beats are of no significance and can be ignored. He may resume his normal activities which may include carpentry, light engineering, and sensible garden work. He should not try to dig heavy soil against time."

Re-examination of the patient a year later showed persistence of the physical signs and of the posterior infarction electrocardiogram. Symptoms were absent. The blood pressure was 128/90.

Two practical points need consideration. The first is that coronary embolism produces electrocardiographic signs of infarction in a heart muscle otherwise hitherto healthy. Furthermore the coronary arteries and their branches are free from disease up to the moment of embolism. From the point of view of prognosis this is important. It means that the injury to the myocardium can be considered as purely traumatic, that the heart muscle in other ways is healthy, and that healing of the infarct is likely to be more perfect than in the case of a patient who has had a myocardial infarcction superimposed on more or less diffuse coronary atheroma.

The second clinical point of importance is that the electrocardiogram of typical myocardial infarction—in this case a posterior one—may remain for many years or indeed for the rest of the patient's life. If at some future date he suffers an attack of dyspepsia, gall stone colic, or even acute intercostal fibrositis simulating coronary pain a thorough examination might then reveal the electrocardiogram of posterior myocardial infarction which would have no basic association with the pain then complained of. This would inevitably lead to a wrong diagnosis, to unjustifiable pessimism, and to a serious interference both psychological and physical with the patient's subsequent life. In the present case this possibility was explained in detail to the patient, who as a precaution was given copies of his own electrocardiogram and of the clinical report.

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ACKNOWLEDGMENT

I am indebted to Dr. C. P. Petch for information about the patient when under his care in St. Helier Hospital, Carshalton.

AMATEUR AND PROFESSIONAL PAINTING

Some notes on the forthcoming exhibition of painting in the Great Hall

by **G. W. DUFF N.D.D.**

" ART IS UPON the town, to be chucked under the chin by the passing gallant ": (Whistler. The Ten O'Clock Lecture.) Art is (or will be) upon St. Bartholomew's Hospital, and why not? An exhibition (for charity, of course), not to be derided, but to be admired. All doctors, nurses, hospital staff, porters and medical students, who paint in their spare time, will be exhibiting. A few of the exhibitors will be professional A.R.C.A.s, N.D.D.s, but the majority are amateurs. These hospital exhibitions are not just another art show, but a collection of pictures painted by people who do not do it for a living ; an amateur exhibition.

" An amateur," said Sir Max Beerbohm, " with innate talent may do, must do, more exquisite work than he could if he were a professional. His very ignorance and tentativeness may be, must be, a means of especial grace."

Here, we will have art from all parts of the hospital. The porter, in the brown coat asks the artist, " Now you're an artist, Gerry, how do you mix brass colour? " And a nurse paints because of the bright colours. Doctors may do it to relax, and I do it because . . . well, it's my job. So the blank-faced, white-coated porter, answering the 'phones, " Surgery Bart's, here ", is an artist who fills in forms and delivers messages to the hard-working doctors (who on occasions put " W.H." on the board to show that, for a brief moment, they are not working hard at their jobs of mending and curing but are having a deserved rest in the " White Hart ").

This porter, who has once at three o'clock in the morning, woken up the wrong doctor (how very nice he was about it!), is an artist, who, in spare moments, in relating tones, drawing heads and seeing Manet's and Degas' all about.

In professional painting the artist will often try to put all of himself into a picture; to the amateur, who leads a seperate life, it is but a small part of his personality. These happy people devote spare time, spare money, and care to painting; with especially made small palettes. It is the main job of these persons that makes their paintings so interesting.

Even if the picture be below par technically, the reason why the picture was painted will still be evident; a story that is always personal, often charming and sometimes exquisite comes out. They please themselves and make no concession to the avoidance of sentimentality. " The roses round the door," certainly still, make them love mother more.

How fascinating to see the landscape painting that is the second string of a surgeon's bow, hung next to a porter's preoccupation with painting the Prince and Princess. How strange to think that the efficient staff, who greet and cure the sick, are those who in off-duty hours take up brushes and canvas to put down thoughts in colour.

In this type of exhibition, one never knows what variety of subjects there will be to see. With professionals their pictures may be much of a standard, perhaps merely a variation in the usual style. Non-professional painters become intimate, in that one sees where the yearly holiday has been spent, charming in that we see what appeals to them; perhaps it is the Bay of Naples or Tibby the tabby cat. The quality that makes, as a rule, each picture a new adventure, makes them unique and gives them their distinguishing character.

I am sure that the paintings in the Great Hall (" I'm not exhibiting in the Great Hall," said a startled 'stripe.' " Sell it for £10; it's not worth tenpence. I thought the show would be in the 'colostomy' "), will be as exciting and fresh as non-professional paintings usually are, and that the virus of abstract or tachiste art has not invaded the sanctuary of St. Bartholomew's Hospital.

Remember the sad example of the amateur, who once painted delicate, detailed and fresh portraits. He started blotching his sitter's face (on the canvas) with green dots and bright red stripes; he had seen Delauney's paintings, and was experimenting.

The hospital is a wonderful subject; is full of wonderful subjects: the surgery with its endless stream of multi-coloured card-clutching, shrivelled, shawled and scaring old ladies, screaming children, bustling people, figures that cannot walk waiting under the clock for transport; untidily booted, dirty kneed urchins, idling while their mothers have treatment.

All this is raw material for the professional artist, but the exhibition, as it is an amateur show, will be, I think, far removed from hospital subjects and, judging by the titles in the 1955 exhibition, most of the work will be of landscapes, still lives and portraits, competently, charmingly, excitingly and interestingly painted. How do the doctors and nurses and porters paint? And what do they paint?

A porter once said to me: " Some are very talented, I'll tell you that. I've been about some of the best art galleries in the world—I'm a bit of a connoisseur about it."

SMELL

by **W. V. CRUDEN**

If you say the word " Smell " in front of a looking-glass, you will probably find that you instinctively turn up your nose a little bit, as if, like the man of Baroda, you thought you perceived a bad odour. But all smells are not nasty. Some of them are perfectly delightful, although we prefer to call these latter " scents " or " perfumes." We can indeed hardly imagine a lady going into a Beauty Parlour and asking for a three-guinea bottle of " Smell." But in the semantic and scientific senses, the word should include both pleasant and unpleasant sensations. The dictionary[1] defines smell as " the sense peculiar to the nose, the quality perceived by this," and that comprises every conceivable kind of odour.

" The number of different and distinct smells is legion "[2] but, unlike tastes, they cannot be classified on any definite basis. Several schemes have been suggested, however, and Crocker and Henderson[5] actually reduced all smells to four basic odours —sweet, sour, burnt and goaty. In their scheme the scent of a rose consisted of 6 sweet, 4 sour, 2 burnt, and 3 goaty units. " A rose by any other name would smell as sweet," and it is doubtful whether this surprising analysis is welcomed by rose lovers in general!

There is a whole world of smell experience open to us, and its range extends from the most exotic perfume to the most nauseating stench. It is strange that this extensive sphere of sensation, with its primitive powers of attraction and repulsion, is almost the whole of the sense experience of the lower creatures, and yet means so little to us human beings. But in spite of our tendency to neglect it, smell plays a fundamental and subtle part in our lives and is worthy of more study than we are apt to give it.

THE SIGNIFICANCE OF SMELL

The world which we perceive by our senses reaches us through varying degrees of complexity. (1) *Smell* is the simplest and most intimate sense, for here the actual molecules of the outside world impinge directly upon a sense organ which is situated in the primary neurone itself. " Here as nowhere else the nervous system is in direct contact with the external environment."[3] (2) In the senses of *taste and touch* the outside object impinges on the peripheral receptors of taste-bud and touch corpuscle, but the impulse has to travel thence before it can reach the primary neurone. (3) In the senses of *sight and sound* the outside object remains at a distance and merely emits waves which travel through the air to the peripheral receptors, after which they too have to proceed as impulses towards the nervous system. (4) If we admit the existence of a sixth sense of *parapsychology* (and it seems as if Science is beginning to accept this[6]) we may imagine an even more complicated and abstruse pathway for this strange " extra-sensory perception." Thus does our consciousness receive the messages of the senses (perhaps in their order of evolution) through increasingly complex pathways. And of these smell is the simplest.

It is not surprising to find that the simplest and most primitive of the senses produces the simplest and most primitive of reactions. Our response to a smell is an almost immediate and instinctive feeling of pleasure or displeasure, of attraction or repulsion. It is what Selye[7] calls a " yes-or-no response." Seldom are we undecided and indifferent in our judgment. Our interjection either is " Ah! " or " Ough! " (perhaps two of the earliest sounds emitted by primitive man) and rarely if ever the more thoughtful " Oh!". Because of this quick reaction we do not linger over smells in the way that we do over the other senses. " I gazed—and gazed " wrote Wordsworth; but we could not expect him to say " I smelt—and smelt." No—one sniff is often enough. Even nice smells do not hold our attention for long. We do not bury our noses in even the most

fragrant of blossoms for more than a brief space of time.

This simple division of smells into pleasant and unpleasant sensations must be a basic defence mechanism, for as a general rule nice smells are good for us and nasty ones are bad for us. Food that smells attractive is generally wholesome, whilst food which has an offensive odour is generally unpalatable, putrefying and even poisonous. Cheese is a curious exception, and enthusiasm for ripe Stilton seems an odd perversion of nature. (Incidentally one of the best smell stories is the tale of the cheese in "Three Men in a Boat"[8]). The repulsive odour of decaying organic matter and excrement prevent us from taking these useless or poisonous matters into our systems, whilst polluted atmospheres with their fetid unpleasantness immediately urge us to seek the wholesomeness of fresh air, and the repugnant smells of bacterial sepsis tend to isolate disease. The nose is the leading part of our anatomy, the prominence which first encounters the world into which we advance. It is "the advanced observation post" in our struggle for existence. In the lower animals with their long snouts it is of even greater strategic importance, for in these "nose-brain animals" the role of smell in their defence and security is paramount. But even in man the first cranial nerve still keeps its age-old function of distinguishing between safety and danger, between what should be absorbed and what rejected, the most instinctive and simple analysis of what is good and bad for us. These critical and primitive experiences of smell are of importance in early childhood development and must make a lasting impression on the maturing brain, for it has been said that nothing in later life can recall our earliest childhood memories so vividly as smells. "Olfaction is paramount among the senses in its power to awaken a train of association in consciousness."[4] Moreover Aldous Huxley[9] goes so far as to claim that "the sensations most heavily charged with emotional content are sensations of smell." In view of these considerations therefore we cannot surely doubt the importance and significance of smell in our lives.

THE EVOLUTION OF SMELL

The simplest and most primitive form of life, the *unicellular amoeba*, has an amazing ability to discern what is good and bad for itself. As it swims about in its watery environment it comes across substances in solution and matter in suspension, and by some mysterious smell-like reaction rejects the harmful and accepts the wholesome. "The introduction of many kinds of chemicals into water causes amoeba to move away from them, showing that it possesses a chemical sense such as we know (immensely more developed) as the senses of taste and smell."[10] On the other hand, when it comes into contact with suitable food it moves towards it, and as the result of this primitive olfactory discrimination amoeba ingests, digests, absorbs and defecates with an efficiency comparable with our own (often more troublesome) digestive systems.

We are apt to think that *fishes* taste, rather than smell, their watery surroundings, but in fact smell is the most important of their senses. A large part of the brain of the dog-fish, for instance, is taken up by the olfactory lobes. Substances dissolved in water are carried into the fishes' nostrils where the hairs of the olfactory sensory cells convey smell impulses along the olfactory nerves just as they do in man. In this way they sense their food, their security and their danger. Salmon, for instance, will not swim for hours on end if they scent the smell of a human hand in the water.[11] One wonders what strange unknown smells greet the noses of fishes in the dark unexplored depths of the oceans.

In the *lower animals* smell is again paramount. A large area of the brain is olfactory in function, and the sense is "almost incredibly acute," especially in the snouted animals like dogs and elephants. Smell guides them to their food, warns them of enemy approach and motivates their sex reflexes. Animals use their own smells for laying trails, marking boundaries, and mating. How extraordinary it is to know that the female of the Great Peacock moth can attract a male who is more than a mile away by the alluring scent of its secretions, or on the other hand that the skunk produces its revolting smell to repel its enemies! The role of the olfactory organs situated in the antennae of insects is, of course, well known, with its double function of guiding the insect to its drinks of nectar whilst at the same time fertilising the flower.

But evolutionists tell us that this sense

of smell, so important in fishes and animals which nose their way along the ground, becomes of far less account when *the primates* climb up into their trees. Sight and sound are now paramount, for the monkeys up aloft can see much further than grounded animals, whilst the smells which hover around the earth are less in evidence up above. Hence the arboreal primates lose their long noses, and by foreshortening the facial region their eyes look forward in stereoscopic vision instead of peering sideways on either side of the snout. In association with these changes the large olfactory areas of the " nose-brain " creatures diminish whilst the optic areas increase in what is now an " eye-brain " animal.[12] Similarly, the birds of the air have a poor sense of smell, except for those (like the petrels and albatrosses) which fly far out at sea and have corresponding difficulty in getting food.[11]

Homo Sapiens continues this dependance on sight rather than smell. It would be facetious to suggest, however, that when he left his monkey cousins and climbed down from the trees on to the ground again his nose began to sprout once more, but it has certainly been suggested that the longer a man's nasal organ, the more of an inquisitive nosey-parker he will be!

What of the future of smell? Who (to use the apt word) can prognose? It would be useful if our olfactory cells, in this new atomic age, could evolve a kind of geiger counter which could " smell " out nuclear radiations in the way our noses sense out other dangers. But, of course, such evolutionary adaptations take time!

THE MECHANISM OF SMELL

The olfactory area is confined to a blind pocket at the top of the nose, well above the main air channel. This small narrow niche is formed by the superior nasal concha, the upper part of the nasal septum, and the roof of the nose (the cribriform plate of the ethmoid). Thus whilst the greater part of the breath passes directly through the nose to proceed down to the lungs, some of the odorous particles are carried upwards into the olfactory area. This occurs partly by diffusion but chiefly by eddy currents formed by the mixing of the cooler ingoing air with the warmer air already in the nose. If we are particularly anxious to smell something we aid this mechanism by lifting our heads (" turning our noses up ") so that the ingoing air will more easily reach the olfactory area, and then sniffing. Each sniff, (as opposed to a snort) compresses the septum and the outer wall of the nose at the front of the respiratory passages, so as to direct the air towards the cul-de-sac. Obviously, any marked swelling of the mucosa of this narrow niche by inflammation or vaso motor reaction will obstruct the passage of air, thus producing anosmia.

Only substances which are volatile and emit particles into the atmosphere produce any odour, and even then it is only some of these that are capable of stimulating the sense of smell. On reaching the olfactory area the odourous molecules first impinge upon a thin layer of serous fluid secreted by Bowman's gland, and they have to penetrate this before they can reach the olfactory hairs which are bathed with it. Thus the molecules make contact with the smell-receptor in a fluid medium, just as they do in the lower aquatic forms of life. But before they can stimulate the sense organ it would seem that they must also be dissolved in the protoplasm of the olfactory hairs, and as these are mainly lipoid material, the particles must presumably be soluble in oil as well as water. (This may explain why oily substances are particularly odoriferous.) Having thus made contact with the olfactory receptor, the smell impulse passes up the hairs to the granules in the " olfactory vesicle " from which these arise, and then proceeds up the length of the bipolar olfactory cell, through the cribriform plate, to end its first cellular journey in the synapse of the grey matter of the olfactory bulb. Here it crosses the synaptic gap to the dendrites of the mitral cell, through whose length its second cellular journey occurs in the olfactory tract towards the smell-centre in the uncus and pyriform area. The remote connections and associational tracts whereby the smell impulse is recognised are still obscure.

Although most smells approach the olfactory area by the front entrance through the nostrils, those liberated by the chewing and swallowing of food come in by the back entrance through the posterior nares and are

smelt by the eater before being expired into the outside atmosphere.

By what strange physico-chemical processes we can so easily distinguish the intensity, origin, quality, nocuousness, significance and memories produced by the inhalation of these various odoriferous particles is largely unknown. But Lord Adrian states that electrode-discharge experiments show how " different substances in threshold concentration will employ different mitral cells for signalling the stimulus "; as the mitral cells are anatomically connected with the olfactory cells it would seem that adjacent groups of the receptors have some subtle selective sensitivity, although the millions of olfactory cells show no histological difference amongst themselves.[13] No doubt molecular configuration, solubility in water, and solubility in lipoid, play their part, together with this selective sensitivity, in the differentiation and recognition of smells.

Pungent, acrid, irritating and cooling sensations are not conveyed by the olfactory system but by the trigeminal nerves. They are closely associated in our minds with smell, as also is the sense of taste. The flavour of food is, of course, a combination of tastes and smells, and this is the reason why we lose pleasure in eating if a coryza temporarily cuts off our sense of smell and leaves us with only the four primary tastes of sweet, salt, sour and bitter. But if we are healthy the smell of good victuals plays an important part in our digestion, not only by increasing our relish for food but by the olfactory reflexes of salivation in the mouth and secretion of appetite juice in the stomach. " Aha! " says Powys[14] as he describes " rich roasted flesh, well baked in an oven that glows as a fiery furnace . . . the odour of the hog's puddings . . . a scent as though mushrooms fry in butter . . . as the kitchen king draws him indoors." Such are the powers which whet our appetites!

We quickly become insensitive to smells—fortunately so when they are unpleasant ones. This rapid adaptation of the smell-sense is not due to a general fatigue of the olfactory nerves, for the power to smell other odours is retained when we have become insensitive to one particular one. This rate of adaptation varies for different smells, and previous exposure makes us less sensitive. Moreover, smells affect each other, for the introduction of a strong one abolishes a weak one, whilst some odours antagonise others (ammonia and acetic acid, for instance). These facts are used to counteract the social ostracisms of halitosis and " body odour " by remedies often advertised by dramatic picture stories in magazines and newspapers (" Harry had looks and an exciting car, yet couldn't find the road to happiness . . . " until he used the advertised deodorant!)

HUMAN SMELLS

Recognition amongst animals is mainly a matter of scent, but this is rarely the case in human beings. It is probable, however that we each have our own *individual smell* but are not sufficiently sensitive to appreciate it. Helen Keller[17] was compensated for blindness and deafness by such a highly developed sense of smell that she says " The dear odours of those I love are so definite, so unmistakable, that nothing can quite obliterate them. If many years should elapse before I saw an intimate friend again, I think I should recognise his odour instantly in the heart of Africa as promptly as my brother that barks." With our concentration on the sense of sight we lose this acute consciousness of smell, but may there not be some olfactory sensation which subconciously causes our otherwise inexplicable aversion or attraction to certain people? " I do not love thee, Dr. Fell, the reason why I cannot tell," may perhaps be continued by the lines " but my subconscious knows full well that I'm allergic to your smell." It has been suggested too that odd infatuations may have a similar basis, but to say that " love at first sight " is sometimes " love at first smell " sounds rather unromantic! Yas Kuno[16], however, considers that axillary apocrine sweat has a definite sexual attraction. In our everyday speech we do, moreover, suggest that we can recognise certain traits of character and motives by smelling—" the odour of sanctity," for instance. " Mrs. Dibbin," says Powys[15] " had a fine nose for sin. She would sniff about a village as though she suspected a cat of misbehaviour . . . "

But although we do not normally recognise each other by smell, there are certain people who make their presence known to us by some *acquired odour*. Sarah Gamp was one such person. "It was difficult," says Dickens, "to enjoy her society without becoming conscious of a smell of spirits." ("Leave the bottle on the chimley piece and let me put my lips to it when I am so dispoged," said Sarah.) Don Quixote warned Sancho "Eat not onions nor garlic, that thy peasantry be not known by thy breath." Tobacco, too, is another offender. Sheer dirt produces its own peculiar odours. We are told of Rasputin that "he seldom wahed and he smelt vilely," as no doubt did those ancient ascetics described by Dean Inge as being "one hideous mass of clotted filth." Caliban had "a very ancient and fish-like smell." Indeed, from the days of the end of the Roman Empire up to the recent reintroduction of hot baths it is probable that many, at any rate of the more plebian members of society, emanated smells which soap and water would have banished. At the other extreme people may deliberately acquire pleasant scents, and although Ben Johnson had his suspicions that, in the lady who is "still to be powdered, still perfumed . . . all is not sweet, all is not sound," the beauty culturists insist on the value of their products. "You must be all-one-fragrance," they say, "from tip to toe." This art of perfumery is an ancient one. The writer found a mud-encrusted Babylonian vessel on an ancient tell in Iraq. On washing away the desert mud a scent of very sweet and unusual fragrance was apparent for a few seconds and then disappeared. He had been smelling an ancient Babylonian perfume used by some fair lady perhaps three thousand years ago. . . . Such are the pleasant and unpleasant smells which may be acquired as supplement to our own mostly unrecognised individual scents.

Certain diseases produce their own smells. Although putrefaction anywhere on the surface of the body may be offensive, especially in frank gangrene, it is mainly in the smell of the expired air that we become conscious of disease. Halitosis is usually due to some local condition in the mouth or nose, but the smell may originate further down the respiratory tract, in the stagnating pus of bronchiectasis or lung abcess, for instance. One of the most insufferable stenches is that of ozoena, where the odour from the foul-smelling crusts in the nose "may be so severe as to render the sufferer an outcast from society."[18] Fortunately for himself the patient is anosmic and is not conscious of the smell. In most other cases of halitosis the offensive odour is also unknown to the subject, hence the deodorant advertisements which stress the social hazards of this predicament.

Although stagnating putrefaction which opens somewhere on the surface of the respiratory passages is the main cause of unpleasantness, it seems that the breath can also excrete certain products of purely "internal" disease. The smell of acetone in ketosis, of mercaptan in liver necrosis, and of uriniferous odours in uraemia can surely only be explained on this basis. Whether people who say they can "smell T.B." or "smell cancer" can really do so is open to question. Clinical acumen along such lines may be a disappearing art.

Mention must finally be made of the smells which do not really exist. Olfactory hallucinations are a feature of the strange uncinate fits in which temporal lobe lesions produce the aura of smells (and tastes) which are usually of an unpleasant nature (like acetylene or the monkey-house at the zoo). It is interesting to note that such hallucinations are often accompanied or followed by a dreamy state in which memories of far-off events are recalled and curious licking movements and smacking of the lips are observable. Further research on these uncinate attacks may throw valuable light on the more abstruse physiology of olfaction.

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LETTERS TO THE EDITOR

Hospital of the University of Pennsylvania, Philadelphia 4.
June 9, 1958.

Editor,
St. Bartholomew's Hospital Journal.

Dear Sir,

I am happy to send to you, for publication, a copy of the letter mailed earlier this month to the director of your medical unit, Dr. E. F. Scowen. Dr. Scowen may have additional information for you about this project.

If a small ceremony is planned for presentation of the first "Pennsylvania Award," I should like to have copies of any photographs taken by your staff.

Cordially yours,
ROBERT E. JONES, M.D.

June 4, 1958.

Dr. E. F. Scowen,
St. Bartholomew's Hospital,
London, E.C.1, England.

Dear Dr. Scowen,

The Medical School and the Hospital of the University of Pennsylvania have wanted to find some appropriate way to express their gratitude to you and to St. Bartholomew's Hospital for the cordiality and generosity with which your staff and your students have received students from this school.

It is my pleasure to inform you that we are now prepared to present to a student at St. Bartholomew's Hospital a gift to be known as the "Pennsylvania Award," inviting a student representative from your hospital to study at the Hospital of the University of Pennsylvania during the next school year and offering him free tuition, room and board, and a sum of five hundred dollars for transportation. The free tuition is offered through the interest of the deans and faculty of the medical school; the room and board will probably be arranged through the kindness of our students themselves; and the money represents gifts from Pennyslvania students who have studied at St. Bartholomew's and from other interested people, including a large sum from the Mary and Albert Laker Fund. Although the details of this plan are not yet completed, we assume that the student will be a second-time clerk who will visit us for a period of three months. We prefer to leave the method of selection of the student to the directors of your medical and surgical units (Sir James Patterson-Ross and yourself), and we shall let you determine the qualifications of your candidate.

Dr. I. S. Ravdin, John Rhea Barton Professor of Surgery, will be in London this month and is looking forward to presenting the first award sometime during his visit.

We hope that this award will serve to express our gratitude as well as to strengthen the association between the oldest medical school in this country and the oldest hospital in Great Britain.

Very truly yours,
ROBERT E. JONES, M.D.

July 4, 1958.

Dear Mr. Jones,

I write on behalf of the Medical College of the Royal Hospital of St. Bartholomew to express the very deep appreciation which is felt towards your Medical School and Hospital of the University of Pennsylvania for their most generous award. This will make possible a liaison between our two Colleges which will surely be a pattern for the future. We have not yet been able to contact Dr. Ravdin, who is in Stockholm, but we hope within the next few days to make the necessary arrangements for his reception here. I would like to assure your Medical School and Hospital that we shall do our very best to ensure that this award is used to the very best advantage.

Yours very Sincerely,
D. F. ELLISON NASH.

Dr. Robert E. Jones,
Hospital of the University of Pennsylvania,
Philadelphia 4,
U.S.A.

The Editor,
St. Bartholomew's Hospital Journal.

HOCKEY

Dear Sir,

May I, through your columns, make an appeal to those who have played hockey for the hospital?

During the last three winters, the 1st XI has played a match against a Past Bart's XI. It seems that either not enough people know of this fixture, or else the title of the team is taken too literally, former players considering themselves *passé*, and it was very difficult to raise a team last year. Unless would-be players make themselves known, a fixture, most pleasant on and off the field, is doomed.

The match this coming season will be on Sunday, March 8th. Would any who even might be available for this or future years, write to :—

Dr. G. Hirst,
316 Brigstock Road,
Thornton Heath.

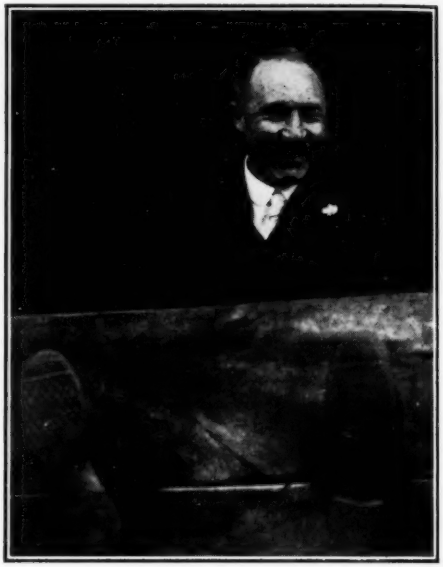
Age, girth and family do not form a bar—bring them with you.

Yours sincerely,
DAVID S. WRIGHT,
Captain of Hockey.

Dear Sir,

I enclose a photo of the late Professor George Gask—taken in the stocks at the 800th Fair held at Barts. I came across it today, and wondered if it would be of interest for the *Journal*.

Yours faithfully,
HAROLD C. J. BALL.



Professor G. Gask

TRAINEE ASSISTANT WANTED

Trainee Assistant wanted by Suffolk practitioner for a year commencing in November 1958 Unfurnished flat. Car essential. Write Box No. 1, St. Bartholomew's Hospital Journal, London E.C.1.

BOOKS REVIEWED

PHYSIOTHERAPY IN SOME SURGICAL CONDITIONS by Joan E. Cash. Price 25/-.

The second edition of this excellent text-book has been extensively revised and has additional sections on athletic injuries and surgery of the knee. The chapter on Thoracic surgery has been re-written in much greater detail.

Throughout, this book is clearly arranged, well illustrated, and the rationale of treatments is always explained. All together it is a comprehensive and practical book, and should continue to be of great use to all Physiotherapists, and also of real value to any members of the Medical Profession who wish to have up to date information on Physiotherapy techniques.

TRUDA WAREHAM.

THE NURSE AND THE DIABETIC by Joan B. Walker, M.D., M.R.C.S., L.R.C.P. **Publishers : Nursing Mirror, by Iliffe & Sons Ltd.**

Though this book is specifically addressed to the nurse, medical students and even general practitioners might read it with profit. It surveys every aspect of the diabetic's life in hospital and outside it. The treatment of all complications is fully given, but the methods of preventing them and of maintaining health are given their correct place of primary importance. The differing methods of management are fairly stated, but the author does not hesitate to give firm and detailed advice on all practical points. The price seems a little high for the size of the book, but small books are comparatively more expensive than large ones, and this one can be most thoroughly recommended to anyone interested in the welfare of the diabetic.

W.E.H.

PRINCIPLES OF MEDICINE AND MEDICAL NURSING by J. C. Houston, M.D., F.R.C.P. and Marion Stockdale, S.R.N., S.C.M., R.S.C.N. **Published by the English University Press Ltd.** Price 25/-.

The Modern Nursing Series of textbooks is written by authors distinguished in their own field, and aims at a high level in presentation, style and content. Each appears to be the product of a teaching hospital, and this one on medical nursing from Guy's. It surveys the whole field of experience in this country, except for the medical illnesses of children, and includes brief chapters on diseases of the skin and psychiatry. The latter is by Dr. Stafford-Clark, and is a description of mental states, and is both lucid and elegant ; one could only wish it were longer. The skin section should be expanded to cover the common conditions (e.g. acne vulgaris, psoriasis) if it is to merit inclusion.

The presentation of all subjects is clear and accurate, and alternative forms of treatment are fairly stated. The nursing problems of all states are considered, and principles given. The general tendency is conservative ; for instance, the dressing is changed every time an ileostomy works (page 80) and the bags which have revolutionised life for these people are not mentioned ; no anti-leukaemia drug more modern than urethane is described ; collapse therapy in the treatment of tuberculosis (page 58) is given considerably more space than resection, and there is no hint of the trend of opinion against collapse.

W.E.H.

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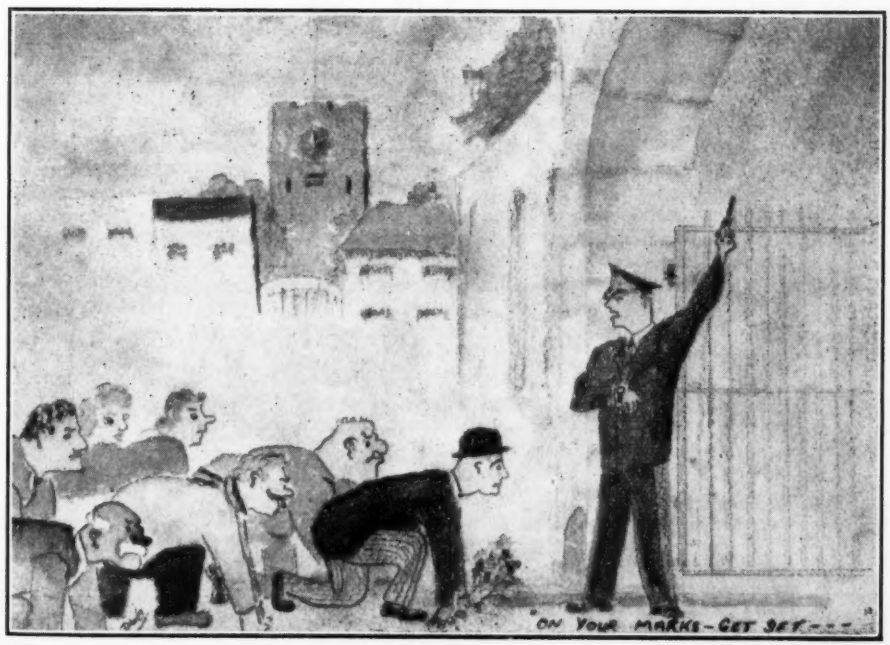

SPORTS NEWS

As mentioned in a previous Viewpoint, the Sports Editor decided to undertake a limited survey of the sporting activities of the student body. Its objects were to discover what percentage of students were active sportsmen, to what extent, and whether there were any notable differences in the answers to these questions when the London, and the Oxford and Cambridge groups were compared.

Information was obtained, almost entirely by direct questioning, about all the male members of a clinical year, including both March and October intakes. All were asked:

1. Whether they had represented the Hospital at any sport, and if so how regularly, and for how long?
2. What games they had played for their own enjoyment?
3. Whether they had held office in any of the Bart's societies, been an officer of the Students Union, or been on the staff of the Journal?

Eighty-four people were included in the survey, of whom 39 were from Oxford or Cambridge, and 45 from London. In the following tabulations of the results, R represents regular players, here taken to be synonomous with those who are regular members of a team, C represents casual players, or those who play the game for pleasure but may have represented the Hospital occasionally, and O represents those who could give a positive answer to question three.

It will be appreciated that the casual group includes people who have played the game to very varying extents. The scope of the survey was not, however, sufficiently great to avoid this. The O group was included to discover whether those who were not active sportsmen, gave their time to the Hospital in other ways.

Table V sets out a list of the possible sports, and the total numbers playing each. From it, it can be concluded (if these results are representative) that the Athletics, Fencing and Table Tennis clubs get their members almost entirely from amongst the London students, and the Shooting club from amongst the Oxford and Cambridge students. The apparently greater proportion of London students playing Rugger may be explained by the fact that many who as Preclinicals played the game resularly, have since ceased to do so, or it may in fact be the case.

Taken as a whole, the survey shows that there are no great differences in the activity of the two groups, or in their interests, and that the proportion of what might be termed malignantly inactive students is quite low.

Results

TABLE I

	London	*Oxford and Cambridge*	*Total*	%
Play no games	11	7	18	21.5
Some disability	1	1	2	—
O	2	2	2	—

TABLE II

	London	*Oxford and Cambridge*	*Total*	%
C. 1 sport only	1	5	6	7
C. 2 or more sports	2	2	4	5
O.	1	1	2	—

TABLE III

	London	*Oxford and Cambridge*	*Total*	%
R. 1 major sport	14	8	22	26
R. 1 minor sport	5	7	12	14
O.	5	6	11	—

TABLE IV

	London	*Oxford and Cambridge*	*Total*	%
R. 2 major sports	5	1	6	7
R. 2 minor sports	2	3	5	6
R. One of each	3	3	6	7
O.	3	2	5	—
R. Three or more	2	3	5	6

In the above tables the different sports have been classed as major or minor. The ones included in the former group are Rugger, Soccer, Hockey, Cricket, Rowing, and Athletics. In each table, the letter O. refers to the people in that group only. The percentages given are of the total included in the survey.

TABLE V

No. who play the sport	*London*		*O. and C.*	
	R.	C.	R.	C.
Rugger	17	1	5	2
Hockey	2	—	6	—
Soccer	4	—	3	—
Squash	2	18	5	16
Fives	—	—	1	—
Fencing	5	—	—	1
Shooting	—	—	6	—
Rowing	2	—	1	—
Cricket	3	3	2	1
Tennis	2	10	5	13
Golf	2	4	4	5
Athletics	6	—	—	—
Table Tennis	2	6	—	—
O.	13		13	

Analysis

From Table I it will be seen that about 20 per cent of the total are completely inactive. Of these only two suffer from a disability which prevents them from playing games, and both are among the 4 who give their time to the Hospital in other ways. A further 12 per cent play one or more games for pleasure only (Table II). Thus one-third of the students do not represent the Hospital at any sport.

Table III might be said to include the average group, those who represent the Hospital at a single sport, major or minor, and almost all of whom play other games for pleasure. It was interesting to note that for the majority playing one major sport, the sport was Rugger, and that this group included the largest number giving a positive answer to question three.

Table IV includes the remaining 25 per cent, the highly active members of the community. Of these the majority played one Summer and one Winter game. A smaller number than was anticipated (6 per cent) played more than two games regularly.

BOAT CLUB

For one Hospital club, at least, the wet summer has not meant the consistent cancellation of fixtures. Competitive boating defies all the elements except ice. Unfortunately the spectators are not so fortunate and, looking back, it is difficult to recall one event which was not spoilt for them, in part at least by this atrocious summer.

The last Saturday in March saw the annual Tideway Head of the River race. The Hospital entered three VIII's, of which one, having trained assiduously for some weeks, gained some ten places to finish in 72nd position. The other two VIII's were scratch

crews in the most sporting sense of the term and, despite their gallant efforts, some 250 rival crews managed to insinuate themselves between the Bart's Gentlemen and the first boat home. The day was marked by a somewhat uneven duel between the Treasurer and the Secretary in an Austin Seven saloon and a native of Bermondsey in a large articulated lorry. In the best traditions of the sea, the smaller craft fought until completely disabled, only to be abandoned where it fell in the heart of Battersea.

The club then set about the task of training two crews for the United Hospitals' Bumps. In preparation, and to gain some racing experience, the first and second VIII's raced at Thames Ditton Regatta. The first boat lost by half a length to Emmanuel School, without showing the cohesion which they had displayed on occasions in training. The second boat rowed with considerable fire and determination, but were defeated by Imperial College, the verdict being only four feet.

On the following Saturday, the first VIII visited Twickenham Regatta, where a stiff cold headwind conferred a wintry mantle to a beautiful setting. Having given their opponents, University College School, the accustomed half a length on the start, Bart's progressed to overhaul their young rivals by the halfway mark. However, due to some misunderstanding, the Bart's crew plodded steadily on to the finish, whilst the school crew sprinted furiously to win by four feet. This was indeed unfortunate, as U.C.S. went on to win the event without serious challenge.

Thus to the Bumps. The Hospital entered five crews once again, including one composed of members of the Rugger club. This crew finished the course twice with the aid of a strong ebb tide, and its members certainly made their mark at the ensuing Bump Supper. The last night of the races was marred by the misfortune of the first VIII. Having rowed over in third place, and having come close to the Guy's rudder on the first two nights, the VIII was surprisingly bumped by Westminster twenty strokes from safety on the final night. Some consolation may be gained from the fact that the crew were rowing with a substitute, but since that substitute was Colin Dale, little excuse can be offered. In the lower divisions the situation is still sorting itself out and many over-placed Barts boats fell to faster crews, often hospital first boats.

As the VIII had not tasted success, it was decided not to keep it together, but to form instead a IV, it being generally agreed that the standard of opposition in the IV events is lower. The IV made its first appearance at Walton, in the Junior-Senior event. Having defeated a crew from Thames by four feet and another from Strode's School easily, it lost, also easily, to St. Thomas's Hospital. The following week, in a similar event at Reading, the IV defeated Lensbury and Quintin before losing by three and a half lengths to Caius College.

Their next visit was to Marlow, that most pleasant of regattas. Here the IV went Senior in preparation for Henley, but they were defeated in the first round by Trinity College, Dublin. And so, on to the climax of the season, Henley. The crew stayed in a house rented at Nettlebed, some five miles from Henley itself. Their first race was against Corpus, Oxford, whom they defeated by one length. Corpus hit the booms just before the finish, although some doubt was cast as to whether this affected the result, as the crews were almost level when the accident occurred. On the following day the Bart's crew was once more defeated rather easily by Caius College, Cambridge, having disputed the race up to the half-way mark.

Finally, a word of appreciation to those gentlemen who gave up their valuable time to assist the club; notably Chris Hudson, Bill Atkinson and John Curry. If the club can claim any success this year, it is that a fair number of keen beginners have been trained and will prove of great value in future years, and with that thought we wish the new officers, Tom Meade and Basil Middleton, a good season.

★

GOLF

After a good start, the club has been having a somewhat disappointing season. This has been due both to the cancellation of several matches on account of the weather, or because either we or the opposition could not raise a team, and to the considerable difficulty often experienced in turning out a reasonable side. The club has, however, played several enjoyable, if not successful, matches recently. As the season does not end till the middle of October, it is hoped that there will be a late return to earlier form.

★

CRICKET

1st XI v. U.C.H. at Mill Hill on July 2nd, 1958. Second Round Cup match. WON by 46 runs.

Fielding a weakened side for this match, Bart's batted first. The early batsmen scored steadily, but forfeited their wickets in doing so, and at lunch the Hospital were 68 for 5. Drinkwater opened, and lasted until 3 p.m., scoring 57, bringing the total to a respectable level.

On the damp wicket, taking some spin, the opening U.C.H. batsmen looked confident, but after a breakthrough by Garrod, Davies bowled two violent offcutters to dismiss the two most dangerous U.C.H. batsmen. The U.C.H. tail was hard hitting, but never looked like reaching the Bart's total.

Bart's 144 (Drinkwater 57).
U.C.H. 98 (Garrod 4 for 30).

1st XI v. U.C.S. Old Boys at Chislehurst on July 5th, 1958. LOST by 80 runs.

On an excellent batting wicket, U.C.S. lost a quick wicket to Whitworth, but Hetherington, batting very strongly for U.C.S., was scoring quickly and soon reached 50 and, with two steady partners, reached his century. U.C.S. were able to declare at 166 for 2. Bart's started well with Pagan and Davies opening the innings scoring slowly, but Bart's lost five quick wickets while only scoring five runs, leaving over 100 runs to win. Juniper and Harvey, with a stand of 42, brought the total to 81, but the later batsmen failed to play out time, the last wicket falling in the final over.

U.C.S. Old Boys 166 for 2 dec.
Bart's 86.

Past XI v. Present XI at Chislehurst on July 6th, 1958. Match DRAWN.

On a very pleasant, blustery day, the Present again played the annual fixture against Mr. J. O'Connell's XI. The Present, batting first, quickly lost a wicket, but then Mitchell and Pagan dug in and, scoring slowly, increased the total to 49, when Pagan gave a sharp catch to Mr. O'Connell. Juniper soon being dismissed by a catch to Dr. Oswald at mid-on, Whitworth joined Abell in a stand of 58. Finally, the Present declared with a total of 175-8, Whitworth being unbeaten with 53.

The Past quickly lost a wicket, but when Tomlinson joined Murley, the score rose quickly, Tomlinson batting brilliantly right through the Past innings for an unbeaten 103. The Past, scoring against the clock, lost wickets rapidly, but could not reach the Present's total, the last scoring stroke being a sharp single by Dr. Oswald off pace bowler Whitworth. Again Mr. O'Connell must be thanked for arranging this most enjoyable match.

Present 175-8 dec. (Whitworth 53 not out, Mitchell 44).
Past 169-8 (Tomlinson 103 not out, Whitworth 3 for 47).

(See photograph over page)

DAMAGES FOR SURGICAL MISHAP

This

COULD HAPPEN

to YOU!

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" Just wait until we bat "

1st XI v. Incognito at Chislehurst on July 12th, 1958. LOST by 5 wickets.

Bart's batting first, lost Davies quickly, but Pagan batted steadily, and with Harvey, put on a stand of 75. A quick-scoring seventh wicket stand between Mackenzie-Ross and Abell of 55, left the Incognitos to get 186 in 150 minutes. The Incognitos started excellently and, batting flawlessly, put on 114 in even time, they lost five wickets in scoring fast and reaching the Bart's total with time to spare they never looked like losing.

Barts 185-7 dec. (Pagan 54, Abell 37).
Incognito 186-5 (Drinkwater 3 for 58).

1st XI v. Hampstead at Chislehurst on July 13th, 1958. Match DRAWN.

Bart's batted first and had a very chequered start. The first five batsmen on the easy wicket struggled for runs and gave their wickets away. Barts were 44 for 5 when Harvey came in and played a very resolute innings of 71, with Drinkwater he had a useful stand of 42, and he was finally last but one out. The last wicket pair had an adventurous, but unexpected, stand. Hampstead had 176 to get in 140 minutes, they started slowly, but scored slowly and slipped behind the clock, and found that they needed 65 in the last half hour. By effective and scientific hitting they scored very fast, and needed four runs in the last over, of which they scored three, the result being a draw.

Bart's 176 (Harvey 71).
Hampstead 176 for 5.

1st XI v. Nomads at Chislehurst on July 19th, 1958. WON by 4 wickets.

Nomads were made to bat first, four of their wickets fell quickly, but a fifth wicket stand of 72 brought their score very slowly to a respectable level. Their next three putting on more runs brought their total to 147. Due to very slow batting they declared at 5.20 p.m., giving Bart's 110 minutes to win, having taken 170 minutes themselves. Barts opened well, the first wicket putting on 38. Then a series of hard-hitting stands, including Davies, Whitworth Abell and Drinkwater, brought the total within reach; Robson, with a classical square cut for four, brought Bart's victory in the third but last ball.

Nomads 147 for 8 dec. (Whitworth 5 for 29).
Bart's 148 for 6 (Davies 56, Abell 33).

WHAT'S THE USE

A famous mathematician once proposed a toast: "To the higher mathematics, and may they never be of any damned use to anybody." Another mathematician said more recently that the subject had no practical value—that it could not be used directly to accentuate the inequalities of human wealth, nor to promote the destruction of human life. We do not know whether the early biochemists held such a pleasantly detached view of their researches, or whether, if anyone said, "What's the use?", they would hopefully reply, like Faraday, "What use is a newborn baby?"

Whether their words were modest or not, useful value has, in fact, come from their work. Spectacularly so in the matter of the functions of vitamins. Take vitamin B_1—in other words, thiamine. It has now been established that thiamine is essential for the oxidation of pyruvate. When thiamine is lacking, pyruvate accumulates. This can cause very unpleasant, even serious symptoms. Various neuropathies (for example, tobacco-alcohol amblyopia with its alarming blindness) are associated with thiamine deficiency. Even today in diet-conscious Britain, minor degrees of thiamine deficiency are by no means uncommon. Those who eat much carbohydrate need extra thiamine, as well as riboflavine and pyridoxine—indeed all the B-complex vitamins; and so do children when they are growing fast, and lactating and pregnant women, and girls slimming on slender diets. That is where Bemax is so useful. Being pure stabilized wheat germ, it contains all the B-complex vitamins, and is rich in iron and protein. You just sprinkle it on your food; Bemax goes well with cereals, curries, and a host of other dishes.

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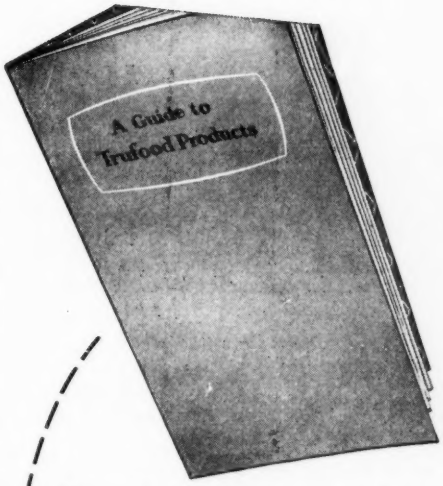

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1st XI v. Dartford at Chislehurst on July 20th, 1958. WON by 5 wickets.

Playing Dartford for the first time, Bart's made them bat. They scored slowly, but effectively, the opening stand putting on 91, then the following Dartford batsmen brought the score to 168 for the loss of five wickets. A very generous declaration gave Bart's even time in which to make the runs for victory. A useful opening stand put Barts on the way to victory, and a hard hitting 55 by Abell gave Bart's victory ten minutes before time.

Dartford 168 for 5 dec. (Whitworth 3 for 37).
Bart's 169 for 5 (Pagan 33, Abell 55 not out).

1st XI v. King's College Hospital at Dog Kennel Hill on July 25th, 1958. Semi-Final Cup match. LOST by 172 runs.

Barts won the toss and put King's in to bat. They started indifferently, their first two wickets falling for 31 runs. The two dangerous County 2nd XI batsmen from King's were now together, and looked very menacing, but they were both dismissed for 60 runs. With the loss of one more wicket, King's were 132 for 5 at lunch and Bart's were in a hopeful position. King's lost two quick wickets after lunch but, as so often happens in Cup matches, the fortune changed, and the last three wickets put on 100 runs, during this period Bart's missed four catches and three easy run outs. King's were finally dismissed for 250 runs, the last hour being played in continuous drizzle. To avoid a replay, Bart's batted, playing in rain, and started disastrously by losing four wickets for nine runs. The rest of the innings was fighting the inevitable end, and Bart's were finally out for 78, Pagan batting throughout the innings for an undefeated 32. With the worst of the weather and playing well below their form, Bart's were beaten by a side who are very well balanced, but should not have lost so disastrously.

King's 250 (Whitworth 4 for 67, Drinkwater 3 for 36).
Barts 78 (Pagan 32 not out).

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